



5696

THYRATRON

GAS-TETRODE, MINIATURE TYPE

5696

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage. 6.3 ac or dc volts

Current. 0.150 amp

Cathode:

Minimum Heating Time, prior

to tube conduction . . . 10 sec

Direct Interelectrode Capacitances (Approx.):^oGrid No.1 to Anode . . . 0.03 μmf Input. 1.8 μmf Output 0.54 μmf

Ionization Time (Approx.):

For conditions: dc anode volts = 100; grid-No.1

square-pulse volts = +50; peak cathode

amperes during conduction = 0.150. 0.5 μsec

Deionization Time (Approx.):

For conditions: dc anode volts = 500; grid-No.1

volts = -100, grid-No.1 resistor (ohms) =

1000; dc cathode amperes = 0.025 25 μsec

For conditions: dc anode volts = 500; grid-No.1

volts = -13; grid-No.1 resistor (ohms) =

1000; dc cathode amperes = 0.025 40 μsec

Maximum Critical Grid-No.1 Current, with ac

anode-supply volts (rms) = 350, and

average cathode amperes = 0.025 0.5 μamp

Anode Voltage Drop (Approx.) 10 volts

Grid-No.1 Control Ratio (Approx.) with grid-No.1

resistor (megohms) = 0; grid-No.2 volts = 0 250

Grid-No.2 Control Ratio (Approx.) with grid-No.1

volts = 0, grid-No.2 resistor (ohms) = 0 15

^o Without external shield.

Mechanical:

Mounting Position. Any

Maximum Overall Length 1-3/4"

Maximum Seated Length. 1-1/2"

Length, Base Seat to Bulb Top (excluding tip). 1-1/8" $\pm$ 3/32"

Maximum Diameter 3/4"

Bulb T-5-1/2

Base Small-Button Miniature 7-Pin

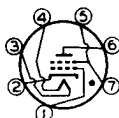
Basing Designation for BOTTOM VIEW 7BN

Pin 1-Grid No.1

Pin 2-Cathode

Pin 3-Heater

Pin 4-Heater



Pin 5-Grid No.2

Pin 6-Anode

Pin 7-Grid No.2

FEB. 1, 1949

TUBE DEPARTMENT

TENTATIVE DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



THYRATRON

RELAY and GRID-CONTROLLED RECTIFIER SERVICE

Maximum Ratings, Absolute Values:

PEAK ANODE VOLTAGE:

Forward.	500 max.	volts
Inverse.	500 max.	volts

GRID-No.2 (SHIELD-GRID) VOLTAGE:

Peak, before anode conduction.	-50 max.	volts
Average, during anode conduction [■]	-10 max.	volts

GRID-No.1 (CONTROL-GRID) VOLTAGE:

Peak, before anode conduction.	-100 max.	volts
Average, during anode conduction [■]	-10 max.	volts

CATHODE CURRENT:

Peak	0.1 max.	amp
Average [■]	0.025 max.	amp
Surge, for duration of 0.1 sec. max.	2 max.	amp

GRID-No.2 CURRENT:

Average [■]	+0.005 max.	amp
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GRID-No.1 CURRENT:

Average [■]	+0.005 max.	amp
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PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode	100 max.	volts
Heater positive with respect to cathode	25 max.	volts

AMBIENT TEMPERATURE RANGE. -55 to +90 °C

Typical Operating Conditions for Relay Service:

RMS Anode Voltage.	117	volts
Grid No.2.	Connected to cathode at socket	
RMS Grid-No.1 Bias Voltage [□]	5	volts
Peak Grid-No.1 Signal Voltage.	5	volts
Grid-No.1-Circuit Resistance	0.1	megohm
Anode-Circuit Resistance [#]	5000	ohms

Maximum Circuit Values:

Grid-No.1-Circuit Resistance	10 max.	megohms
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■ Averaged over any interval of 30 sec. max.

□ Approximately 180° out of phase with the anode voltage.

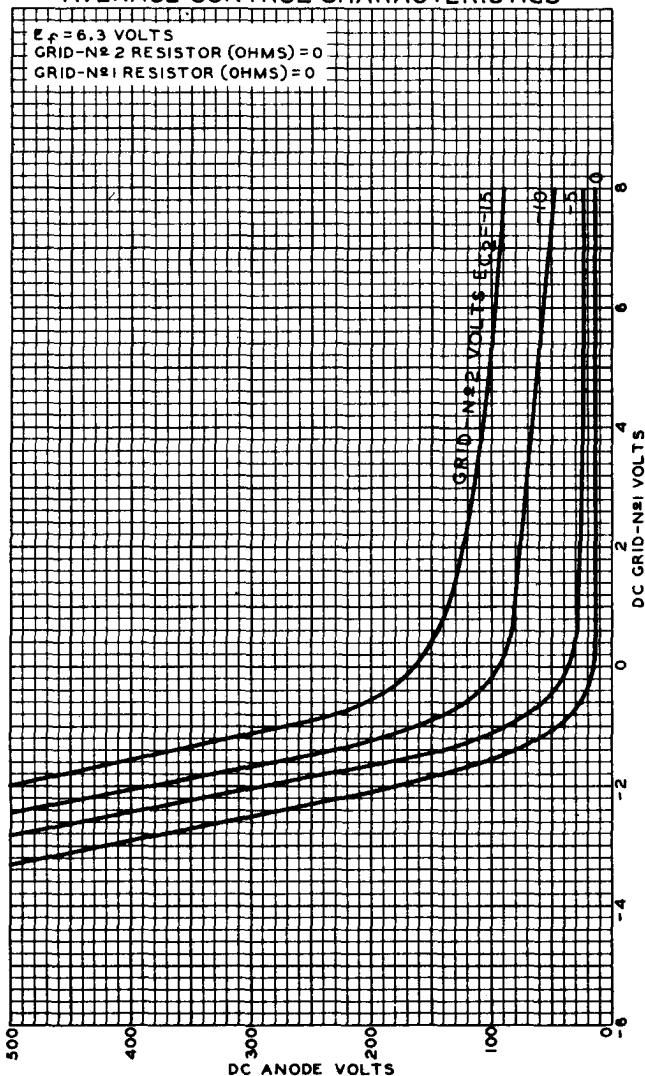
Sufficient resistance, including the tube load, must be used under any conditions of operation to prevent exceeding the current ratings.



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AVERAGE CONTROL CHARACTERISTICS



AUG. 6, 1948

DC ANODE VOLTS

TUBE DEPARTMENT

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-7044

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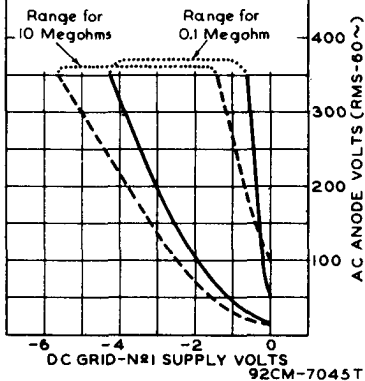
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THYRATRON

OPERATIONAL RANGE OF CRITICAL GRID VOLTAGE

TYPE 5696

GRID-N#2 (SHIELD) VOLTS=0
 RANGES SHOWN ARE FOR TWO VALUES
 OF GRID RESISTOR-0.1 MEG. AND 10
 MEG.-AND TAKE INTO ACCOUNT INITIAL
 DIFFERENCES BETWEEN INDIVIDUAL
 TUBES & SUBSEQUENT DIFFERENCES
 DURING TUBE LIFE, FOR A HEATER-
 VOLTAGE RANGE OF 5.7 TO 6.9 VOLTS
 AND FOR AN AMBIENT TEMPERATURE
 RANGE OF -55 TO +90°C

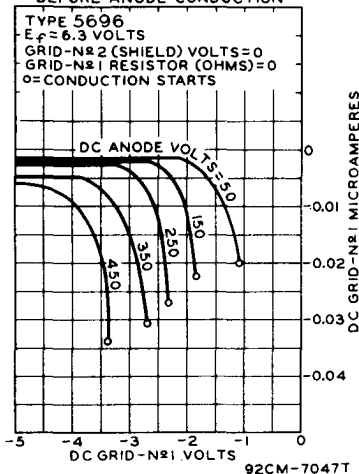




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THYRATRON

AVERAGE CHARACTERISTICS
BEFORE ANODE CONDUCTIONAVERAGE CHARACTERISTICS
DURING ANODE CONDUCTION